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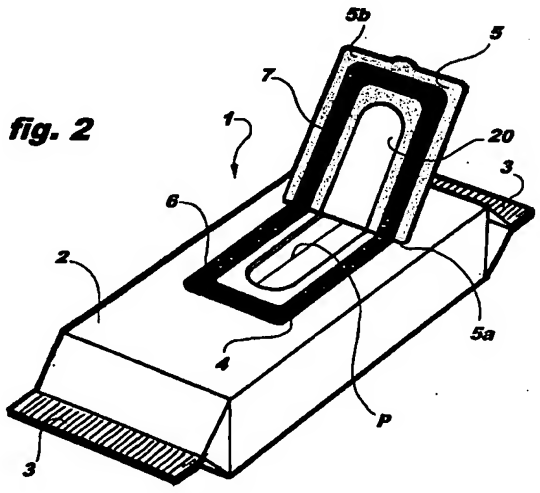
(54) Packaging, for example for hygiene-health products

(57) Packaging which can be used e.g. for hygiene-health products comprises an envelope (2) to receive products (P) in which at least one opening (4) is provided for removal of the products (P) with an associated corresponding closure arrangement (5) which can be selectively moved between a position in which the opening is closed and a position in which the opening is free in order to permit the said products (P) to be removed through the said opening (4). Microhook attachment elements which can be selectively engaged and disengaged through the effect of moving the said closure arrangement (5) between the closed position and the open position are provided between closure arrangement (5) and the envelope (2). Sealing of the packaging is ensured by the abovementioned microhook elements (6, 7), preferably in combination with adhesive attachment means (5b).

fig. 2



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Description

[0001] This invention relates to packaging in accordance with the precharacterising portion of claim 1.

[0002] Packaging of this type is very widely used especially for the packaging of premoistened or preimpregnated products such as e.g. the small tissues or towels commonly known as "wet wipes".

[0003] The arrangement of using packaging essentially comprising rigid containers comprising a containment body (which may be cylindrical) with an associated lid provided with a selectively recloseable opening for removal/dispensing of the products has proved itself for this particular application over the years.

[0004] In some applications the products in question take the form of a sheet provided with pre-cut lines of weakness at predetermined distances. When the sheet is removed from the delivery opening, it is subdivided along the pre-cut lines as a result of a joint effect with springy structures which project towards the interior of the opening. All this is to bring about the removal of individual wipes as a result of the effect of the above mentioned subdivision.

[0005] The arrangement which provides for the use of a rigid container, also substantially comprising a tray provided with a selectively openable lid, has also proved itself. Opening the lid makes it possible to gain access to a pack of individual wipes or towels which are folded in a generally concatenated arrangement so as to form a chain of "interleaved" products. In this way the removal of an individual product from the packaging places the subsequent product in a position ready to be taken out.

[0006] This arrangement was initially applied in the expectation that the contents could be periodically refilled with the introduction of a new pack of products taken from a flexible bag or envelope acting as a so-called "refill".

[0007] The arrangement which does away with a rigid container then proved itself. In this case the envelope or bag container (of the "flowpack" type) is no longer used to contain the refill for the rigid container, but directly constitutes the container from which the products, which are preferably arranged in the concatenated sequence described above, can be progressively removed through an opening provided in the container wall.

[0008] This opening is initially closed by a protective flap, also of flexible material, initially designed to seal off, when the pack is complete, the opening through which the products are taken out with a view for dispatch for distribution and sale. The aforesaid flap is attached adhesively to the body of the packaging along the perimeter of the opening which the flap is intended to close off. In a preferred arrangement, when the packaging is being prepared, the opening in the wall of the packaging is still not yet present, but only defined around its perimeter by a line pre-cut for separation (e.g. punching or perforation). The closure flap is then initially attached adhesively to the wall of the packaging over its entire surface, and therefore also in the region which is intended to lie within the pre-cut line defining the perimeter of the opening. When the consumer first lifts the flap of the packaging, the flap tends to pull together with it the surface of the wall to which it is adhesively bonded. While the portion of this surface which is outside the pre-cut line remains attached to the remainder of the wall of the packaging, the portion within it separates from the rest along the pre-cut line and follows the flap in the lifting movement. In this way an opening is formed in the wall of the packaging through which the products can be removed. The opening formed in this way can then be closed again by again applying the flap against the wall of the packaging, using for this purpose e.g. the peripheral portion of the flap which surrounds the portion of wall which the flap has taken with it in the lifting movement. This peripheral portion continues to be adhesive and is therefore capable of becoming attached to the wall of the packaging along the perimeter of the opening through which the products are removed.

[0009] The flap in question is normally associated with a seal which is capable of being ruptured as a consequence of action or an attempt at action intended to open the packaging: all this so as to render obvious any handling which might be attempted, particularly at points of sale, for unauthorised removal of individual products from the packages exposed for sale, and therefore to provide a disincentive.

[0010] In many cases the aforesaid flap is firmly welded to the body of the packaging along one of its sides. This prevents the operation of lifting the flap with respect to the opening (to permit the products to be taken out) causing complete detachment of the flap from the packaging, with obvious risks of the contents falling out/being dispersed.

[0011] The arrangement based on (total or partial) adhesive bonding of the flap to the body of the packaging is however in conflict with the fact that the substances with which the products are premoistened or preimpregnated, and/or other substances (e.g. creams, talcum powder or miscellaneous powders) frequently used together with the products, have an antagonistic effect against the adhesive materials used to ensure the possibility of opening and reclosing the flap.

[0012] After a certain period of use it can in fact happen that the flap cannot be returned to the closed condition against the body of the packaging because the adhesive material provided for this purpose has lost all or some of its effectiveness.

[0013] The corresponding possible disadvantages are many: it is sufficient merely to mention the fact that the opening for delivery of the products remains uncovered, with the consequent possibility that the products

can at least to some extent come out of the packaging in an undesired way, or the fact that the interior of the packaging becomes to a certain extent, exposed to the outside environment, with the consequent possibility of loss of the degree to which the products are premoistened.

[0014] Packaging of the type specified above also tends to be used increasingly in industrial and even medical environments. In this context, after a product has been removed from the packaging, moving the protective flap away from the opening, it is desirable that it should be possible (also for a large number of extraction cycles - in practice until all the products which are in the packaging have been removed) to close the flap protecting the opening in a condition which provides a seal with respect to the outside environment (e.g. to prevent moisture, bacteria, dusts, etc., from penetrating within the packaging).

[0015] From this it will be understood that the field of the possible application of the invention is not restricted to the area of humidified products (e.g. the so-called "wet wipes"), but may be extended to a variety of areas such as, e.g. the packaging of medical products and/or articles, etc.

[0016] The purpose of this invention is to provide an arrangement which is capable of overcoming the above-mentioned disadvantages in the containers previously mentioned, regardless of the specific details of their construction.

[0017] In accordance with this invention, this objective is accomplished through a container having the characteristics specifically claimed in the following claims.

[0018] The invention will now be described, purely by way of a non-restrictive example, with reference to the appended drawings, in which:

- Figures 1 and 2 illustrate an embodiment of the arrangement according to the invention, with reference to two different conditions of use, and
- Figure 3 illustrates the criteria for defining a number of parameters which are capable of determining the sealing characteristics of packaging according to the invention.

[0019] With reference to the above illustration of the disadvantages and/or requirements underlying the invention given above, it is obvious that the term "receiving envelope", as used below in the description and in the claims which follow, indicates in general any body (whether rigid, semi-rigid, deformable or flexible, etc.) which is capable of performing a containment action, e.g. in order to receive within it moisturised hygiene-health products such as premoisturised or pre-soaked tissues or towels, with the possibility that these products can be selectively removed from the container through at least one opening provided in the wall of the container.

[0020] Similarly, the words "sealing arrangement" as used below in the description and the claims which follow in general indicate any body which is capable of being selectively applied to the closure of the aforesaid opening with the possibility of therefore being at least in part separated from, moved away from or displaced from such opening so as to permit the products which lie within the packaging to be removed through the aforesaid opening.

[0021] In the example illustrated in the appended drawings (particular emphasis is placed on the fact that what is illustrated is only one of the possible embodiments of the invention), a packaging for hygiene-health products such as pre-soaked or premoisturised tissues or towels is indicated as a whole by 1.

[0022] In the example illustrated, packaging 1 comprises a containment envelope 2 essentially comprising an envelope or bag of flexible material (e.g. coextruded polyethylene) which is capable of receiving within it a pack P of hygiene-health products. The products in question may be premoisturised tissues or towels connected together in a chain of separable elements or arranged in accordance with a generally interleaved arrangement. The specific characteristics of the products and the manner in which they are packaged are not however in themselves defining for the purposes of implementing the invention. Envelope 2 may advantageously be of the "flow-pack" type, comprising a sheet which is closed to form a tube along a first line of longitudinal welding (not shown in the figures) with the subsequent formation of two lines of transverse welding 3.

[0023] On one of the walls of envelope 2 (preferably corresponding to one of the long sides - but this choice is not however essential) there is provided an opening 4 which can be used to remove products P from the packaging.

[0024] Everything which has been said hitherto corresponds to factors which are well known in the art and which therefore do not require detailed illustration in this context.

[0025] Recreating from this point of view an arrangement which is in itself known - opening 4 is associated, as a closing arrangement, with a flap 5 of laminar material normally consisting of the same material as the packaging as a whole or a similar material. Closure arrangement or flap 5 may be selectively removed by the consumer (in accordance with factors which are wholly obvious and known, which do not require to be illustrated in this context) from a closed position (shown in Figure 1), in which flap 5 closes opening 4, to a position in which the products can be removed (shown in Figure 2) in which flap 5 is lifted, displaced, detached or otherwise at least partly removed with respect to opening 4 so as to leave such opening 4 wholly or partly free so as to permit products P which lie within the packaging to be removed.

[0026] In this respect it may be provided that flap 5 is permanently attached to the body of envelope 2 (e.g.

by being continuously heat welded) along one of its sides, indicated by 5a.

[0027] Although preferred for reasons which will become clearer below, this arrangement is not in itself essential.

[0028] In a known way (as already explained previously) the flap may also be used to create opening 4 in the wall of envelope 2 when first detached from the packaging by means of the pre-cut line such as a punched or perforated line. In this respect, the portion of the wall of envelope 2 which flap 5, which is rendered adhesive on its surface which is intended to face envelope 2, has pulled with it on the first occasion when the pack is opened can be seen in Figure 2 and is indicated by 20. The part of flap 5 to which the portion of envelope 20 is bonded is therefore no longer adhering, but the outer or peripheral portion indicated by 5b continues to be adhesive, for a variable length of time.

[0029] An important feature of the arrangement according to the invention is provided by the fact that the attachment between flap 5 and the body of envelope 2 in the closed position provides for the use of a so-called "microhook" structure (preferably in addition to attachment means of the adhesive type).

[0030] The term "microhook" is used here to indicate, in its widest sense, attachment structures of the "hook and loop" mechanical type which are sometimes also referred to as "overlap" closures, or in most common use are simply referred to by the trade name of "Velcro".

[0031] As is well-known to those skilled in the art, the aforementioned closure devices may in their most conventional and ordinary form take the form of two complementary complexes (the hooks and the loops or complementary areas of hooks and loops) located on two joinable complementary members which are capable of being attached (e.g. by bonding or heat welding) to both parts of the closure which are intended to be connected. It is likewise known, however, that alternative arrangements provide for the possibility of using laminar structures, preferably functioning as loops (therefore also materials which are wholly or partly capable of constituting the body of envelope 2 or flap 5) by a locally apertured structure (which is typically hairy or "tufted") which is capable of defining a sufficiently engaging structure to achieve attachment with the hook members provided on the complementary part. Typical examples of structures of this type are e.g. coatings of non-woven materials which are capable of being used e.g. to wholly or partly cover the outside sheets (the so-called back-sheets) of hygiene-health products such as nappies/diapers for babies, toddlers and incontinents - the latter being an application in which the use of microhook structures has already been tested and is starting to become quite widespread in order, e.g. to seal the product along the waistline by means of tabs provided for this purpose and/or so that the product can be closed up once it has been folded on itself after use.

[0032] The reference to the interposition of a mechanical microhook closure structure between the body of envelope 2 (in particular between the perimeter zone of opening 4) and closure arrangement 5 should not therefore in any way be interpreted within the scope of this invention as requiring a need for the application of supplementary closure members to the body of envelope 2 and the body of closure arrangement 5.

[0033] The aforesaid mechanical coupling configuration using microhooks may in fact simply be achieved by using the material comprising flap 5 and/or the material comprising or coating envelope 2 as one of the complementary parts, in particular in the regions surrounding opening 4, in so doing making use of the intrinsic properties of the corresponding material (e.g. the fact that it comprises or is coated with a non-woven material of the tufted type) and/or through the effect of a specific treatment, which may be local, applied to the abovementioned material or coating, e.g. a heating treatment which induces the formation of a local porous or microporous open cell structure in the material or in a coating layer which is likely to constitute an anchoring formation for the complementary hook members.

[0034] In this respect it should be noted that where "hooks" are mentioned within the scope of the term "microhooks" this should not in any way be interpreted in a sense limiting the conformation of the corresponding elements - it is in fact well-known in the art relating to closures commonly known as "Velcro" that the hook components may have different conformations from the conventional fishhook conformation, such as e.g. mushroom, hammer head, etc., conformations.

[0035] In the course of the last few years microhook closures have found application in a great variety of areas. In particular, in addition to the area of nappies, to which specific reference has been made above (where the use of microhook tabs has been provided as waistline closure arrangements), there are many areas in the art in which microhook closures are used in conjunction with envelope or bag containers, even in special sectors such as e.g. furnishing, for the closure of cushion covers or pillow slips.

[0036] This invention is based on recognition of the fact that a microhook closure may be used to achieve attachment either wholly or in part between a closure arrangement such as flap 5 and the perimeter of an opening (such as opening 4 illustrated in the drawings), including in the specific field of application considered here where it is necessary to ensure, e.g. that the characteristic moisture content of the products P is preserved without undergoing any appreciable change over the course of time and/or to ensure adequate protection from external agents (dust, etc.).

[0037] All this in such a way that the mechanical type closure may replace, even only in part, the conventional adhesive attachment between the closure arrangement (flap 5 in the example illustrated) and the corresponding opening (opening 4 in the example illus-

trated) avoiding the disadvantage due to the fact that the adhesive closure can lose its efficiency when it becomes contaminated e.g. by liquid and/or oily substances or by dusts which reduce its adhesive properties.

[0038] Without wishing to be bound by any specific theory in this respect, there are grounds for believing that the sealing characteristics of a microhook closure are primarily linked to the ability of part of the closure to act as a labyrinth, in the sense of the possibility of it being crossed transversely by liquids, vapours, dusts or bacteria (hereinafter referred to as a group by "intrusive agents").

[0039] To clarify ideas, with reference to Figure 3, the abovementioned direction of travel is indicated by an arrow, indicating in general the complex of paths between the two complementary members 6, 7 constituting the closure as the direction in which a microhook closure may be crossed transversely in the plane of attachment between the complementary members.

[0040] In the embodiments illustrated the microhook closure is essentially defined by two strip members 6, 7 which extend continuously or discontinuously along the perimeter of opening 4 and along the corresponding portions of flap 5, therefore, in the embodiment illustrated, along and in an intermediate position within the external or peripheral portion 5b.

[0041] This particular arrangement is particularly advantageous and preferred for reasons which will be better illustrated below; it is not however essential.

[0042] The fact that reference is made to the possibility of continuous or discontinuous extension is designed to take into account essentially two factors:

- as illustrated in the appended drawings, flap 5 may be stably attached (e.g. by being heat welded) along one side 5a to envelope 2 along a corresponding side of opening 4; in the areas where this physical attachment is provided between flap 5 and the body of envelope 2 it is not necessary to provide for the existence of (further) closure arrangements, and
- at least in some applications, the two parts 6, 7 of the microhook closure may present discontinuities corresponding to which the attachment between flap 5 and the body of envelope 2 is provided (at least at the level of the first packaging) by means of a conventional adhesive attachment.

[0043] The latter arrangement may be suggested (essentially in relation to considerations of complexity and cost of construction) in such applications where the two complementary parts 6, 7 forming the microhook closure are constructed in simplified form, e.g. in the form of two pairs of complementary strips located on the two sides of opening 4 corresponding to the longitudinal direction of packaging 1. A choice of this nature may be suggested e.g. by the need to apply the said strips "in-line" during the process of forming the envelope in the context of a packaging line of the flow-pack type.

[0044] In this latter situation the portion or portions of the perimeter of the opening which remain so to speak "uncovered" by the microhook closure are closed by making use of the adhesive attachment of flap 5 to the perimeter of opening 4. The fact that this adhesive attachment may weaken over time does not however prejudice the possibility - for the user - to close the packaging again and again reliably, for a practically infinite number of times after it has first been opened, thereby preventing the products from coming out.

[0045] Without however wishing to be bound in this case also to any specific theory in this respect, there are grounds for believing that the level of resistance to the intrusive agents previously mentioned demonstrated by an ordinarily manufactured microhook closure is essentially determined by at least four factors, namely:

- the width or depth of the closure: in the case of a microhook closure having a strip structure this width or depth is essentially the width of the strip (see parameter d in Figure 3, as opposed to the generic parameter of length L which identifies the longitudinal extent of the closure),
- the density of the microhook elements,
- the conformation of the complementary elements forming the microhook structure, and
- the nature of the material forming such elements.

[0046] In the case of the first parameter it is obvious that in the applications to which specific reference is made (packages of premoisturised tissues or towels) it is essentially preferable to avoid the use of microhook closures which are too broad. This is both for obvious reasons of size, and because a rather wide microhook closure tends also to be quite rigid, which may have an unfavourable effect on the flexibility of closure flap 5 and/or the corresponding parts of the packaging surrounding opening 4 - flexibility which, while not constituting an essential property, certainly constitutes a welcome feature. As a result of this consideration, widths or depths of the closure of the order of a few millimetres or in any event of not more than a centimetre are to be preferred for the applications considered above.

[0047] Again concerning the depth or width of a microhook closure it will also be noted that the two complementary parts defining the closure do not need to be of identical width, as a result of which the corresponding parameter is in fact defined by the width or depth of the region in which the complementary elements of the closure effectively act together. With reference to the embodiment in Figures 1 and 2, it has already been stated that one of the parts of the microhook structure may directly comprise the outer surface of envelope 2 in the region surrounding opening 4 or a coating applied thereto. It is however obvious that only a restricted por-

tion surrounding opening 4 in this envelope is intended to act effectively together with the complementary members borne on flap 5 - therefore only the width of the region in which there is actually cooperation between the complementary elements will be taken into account. For example, assuming (always as a hypothesis) that the entire surface of flap 5 which is intended to face the body of envelope 2 - and therefore comprising the portion which in the example illustrated is covered by the portion of envelope 20 which is removed on first opening - bears microhook elements which are capable of acting together with the outer part of enclosure 2, it is obvious that the region in which they act together - which must be taken into account when assessing the abovementioned width or depth d - is only that region in which the surface of flap 5 acts together with the perimeter of opening 4. When assessing the aforesaid width the surface area occupied by opening 4 proper will not therefore be taken into account.

[0048] The other two parameters considered (the density and shape of the microhook elements), although conceptually separate, have been proved to be extensively interdependent both in construction and in assessment of the holding characteristics of a microhook closure with respect to intrusive agents. Of course, the width or depth of the closure also comes into play when defining the latter parameter in absolute terms.

[0049] Finally, as far as the nature of the materials is concerned, it is obvious that this term also comprises any treatments applied to such components such as e.g. and without any intention of restriction: the application of soaking liquids, surface coatings and/or treatments designed to change the physical properties (e.g. providing surface softness) and/or chemical properties of the elements, including the application of agents having an antibacterial function.

[0050] In the arrangement illustrated in the appended drawings a closure mechanism in which several components or functions are included has been made use of in order to ensure a seal for the packaging.

[0051] At the time of initial packaging, when envelope 2 is formed (e.g. using the flow-pack technique) around products P, the packaging itself in practice constitutes a kind of sealed envelope or bag in which products P are contained. The wall of the envelope so formed is so to speak locally "nicked" by the punching or perforation defining the perimeter of opening 4. Within the context of the wall of the envelope the aforesaid punching or perforation however produces openings which are barely pervious, if not blind and in any event of very reduced clear cross-section. In any event, a leaktight seal over the openings in question is provided by the central portion of flap 5 which is adhesively applied to the wall of the envelope corresponding to the region where opening 4 will be formed. All this with the further sealing effect deriving from the presence i) of microhook closure 6, 7 which surrounds the aforesaid region and ii) the edge of outer flap 5 with respect to the microhook closure itself. Under such conditions the envelope of packaging 1 forms a virtually absolute seal against intrusive agents of any kind. This makes it possible to store the packagings (keep them in stock) for long periods and/or in adverse environmental conditions without any risk of the deterioration and/or spoiling of products P.

[0052] Subsequently, after the packaging has been opened for the first time (which, on the basis of criteria already described many times, has resulted in the formation of opening 4 with wall portion 20 which remains attached to flap 5) and the packaging has been closed again by applying flap 5 again against envelope 2, the seal continues to be ensured as above through the effect of two mechanisms:

- the sealing effect provided by microhook closure 6, 7, and
- the sealing effect provided by the two regions (constituting the two U-shaped strips in the example illustrated) in which the microhook closure, and in particular element 7 thereof subdivides -by extending therethough- the outer adhesive portion 5b remaining on flap 5 after adhesion of the portion of envelope 20.

[0053] Subsequently, the adhesion properties of the aforesaid regions may decrease, for the reasons indicated at the start of this description. In any event, being coextensive and/or extending at least substantially adjacent (and preferably in proximity to, and in an even more preferred way, as in the present situation, in close proximity to) the adhesive attachment regions defined by the portion of flap 5b, microhook closure 6, 7 has an effect of a synergistic type in comparison with seals of the adhesive type. This insofar as the microhook closure bears the greater part of the stresses which would tend to detach flap 5 from the envelope even when the adhesive attachment power weakens. The adhesive attachment can therefore ensure an effective seal even when the said attachment has become weak to a point where the adhesive attachment alone is no longer sufficient to hold flap 5 against envelope 2.

[0054] On yet more subsequent occasions the adhesive attachment capacity of tab 5 may also reduce completely or substantially completely. Even under these conditions, when flap 5 is closed against opening 4, a sufficient seal against the exterior (and the necessary captive effect which retains flap 5 against the wall of the envelope) will continue to be ensured by microhook closure 6, 7 which is substantially refractory with respect to phenomena (contamination by liquids and/or dusts in particular) which reduce the adhesive bonding capacity of flap 5 with respect to envelope 2.

[0055] It will be appreciated that the mechanism described effects a possible graduation in the sealing characteristics which corresponds precisely to the requirements of use: an absolute seal at the time of ini-

tial packaging (with the possibility of providing long storage periods without the risk of any kind of deterioration) and the possible gradual reduction in the adhesive sealing component as consumption of the products proceeds, with the possibility of relying upon a synergistic effect from the microhook closure. In all of this it is however possible to always count on the sealing component deriving from the presence of such a closure.

[0056] From an examination of the appended drawings it will also be understood that, by subdividing the adhesive portion 5b into two regions, the microhook closure will exert some protective effect against the spread of contaminating agents towards the interior region of adhesive portion 5b surrounding the closure even when flap 5 is in the open position.

[0057] As already mentioned in the introduction to this description, closures of the type described are very suitable for association with closure seals (e.g. adhesive labels applied partly to the outside of flap 5 and partly to the immediately adjacent region of envelope 2) which makes it possible to check (in a known way, through the effect of tearing the label) that the packaging has been opened at least once. Obviously all of this has the intention of indicating any improper handling of the packaging.

[0058] As mentioned, the embodiment of the invention illustrated in the drawings constitutes the one which is preferred at the present time. Numerous construction variants are of course possible such as, e.g. variants in respect of:

- the characteristics of the microhook closure, in particular as regards the possibility, as already mentioned previously, of using the surface conformation of parts of envelope 2 and/or the flap and/or coatings applied thereto directly for the purposes of providing the closure,
- the possible use of microhook closures which do not extend continuously along the entire perimeter of the flap (with the possible exception of zone 5a welded to the envelope), but extend with one or more breaks in continuity,
- the possibility of providing the adhesive attachment between flap 5 and envelope 2 by rendering the corresponding part of the envelope adhesive, together with or as an alternative to flap 5, as is at least implicitly assumed in the preceding description,
- the fact of making use of arrangements other than the one illustrated (removal of portion 20 of the envelope by flap 5) in order to create opening 4,
- the fact that microhook closure 6, 7 is directly located along the perimeter of flap 5, therefore without allowing the outer region of portion 5b of the flap to project beyond the closure,
- the possible presence of this projecting region, but without the properties of adhesive attachment to the envelope, this also applying to the internal region of flap 5 surrounded by closure 6, 7,
- the possible use of a flap (or a similar closure arrangement) which as a whole is rigid or not very flexible, if appropriate in combination with a correspondingly rigid collar-shaped engaging arrangement surrounding opening 4, and
- the possible absence, including in the packaging just completed, of an adhesive attachment between flap 5 and envelope 2, therefore having the seal effect fully required from microhook closure 6, 7.

[0059] Of course, without prejudice to the principle of the invention the details of the construction and embodiments can vary widely with respect to what has been described and illustrated without thereby going beyond the scope of this invention.

Claims

1. Packaging comprising:

   - an envelope (2) for receiving packaged products (P), with at least one opening (4) being defined in the said envelope (2) for the removal of products (P) with a corresponding closure arrangement (5) associated therewith adapted to be selectively moved between a position in which the opening is closed (Figure 1) and a position in which the opening is disengaged (Figure 2) in order to permit removal of the said products (P) through the said opening (4),
   - characterised in that between the said closure arrangement (5) and the said envelope (2) there are provided microhook attachment elements (6, 7) adapted to be selectively engaged and disengaged through the effect of transferring the said closure arrangement (5) between the said closed position and the said open position; the action of sealing the said opening (4) being provided at least in part by the said microhook attachment members (6, 7).

2. Packaging according to claim 1, characterised in that at least one adhesive attachment region (5b) is provided between the said closure arrangement (5) and the said envelope (2).

3. Packaging according to claim 2, characterised in that the said adhesive attachment region (5b) extends along the perimeter of the said opening (4).

4. Packaging according to claim 2, characterised in that the said microhook closure elements (6, 7) are located at least substantially adjacent to the said adhesive attachment region (5b).

5. Packaging according to claim 2, characterised in that the said microhook closure elements (6, 7) are

located in proximity to the said adhesive attachment region (5b).

6. Packaging according to claim 2, characterised in that the said microhook closure elements (6, 7) are located in close proximity to the said adhesive attachment region (5b).

7. Packaging according to any one of claims 2 to 6, characterised in that the said microhook attachment elements (6, 7) are substantially coextensive with the said at least one adhesive attachment region (5b).

8. Packaging according to any one of claims 2 to 7, characterised in that the said microhook attachment elements (6, 7) extend through the said at least one adhesive attachment region (5b) provided between the said closure arrangement (5) and the said envelope, subdividing the portion into two regions, respectively an inner and outer region with respect to the microhook closure elements (6, 7).

9. Packaging according to any one of the foregoing claims, characterised in that the said opening (4) is defined by a pre-cut line bounding a corresponding portion (20) of the said envelope and in that the said closure arrangement (5) is initially applied adhesively to the said corresponding portion (20) of the envelope; the arrangement being such that subsequent movement of the said closure arrangement (5) into the said open position of the opening has the effect that the said corresponding portion (20) separates from the envelope along the said pre-cut line remaining attached to the said closure arrangement and providing the said opening (4) in the envelope (2).

10. Packaging according to any one of the foregoing claims, characterised in that the said closure arrangement (5) is at least locally (5a) stably attached to the said envelope (2).

11. Packaging according to any one of the foregoing claims, characterised in that the said microhook attachment elements (6, 7) are of continuous extent.

12. Packaging according to any one of the foregoing claims 1 to 10, characterised in that the said microhook attachment elements (6, 7) are of discontinuous extent.

13. Packaging according to any one of the foregoing claims, characterised in that the said microhook attachment elements (6, 7) comprise at least in part the material comprising at least one of the said closure arrangement (5) and the said envelope (1).

14. Packaging according to any one of the foregoing claims, characterised in that the said microhook attachment elements (6, 7) comprise at least in part a coating associated with at least one of the said closure arrangement (5) and the said envelope (2).

15. Packaging according to claim 13 or claim 14, characterised in that at least one of the said envelope (2) and the said closure arrangement (5) has at least locally a tufted appearance.

fig. 1

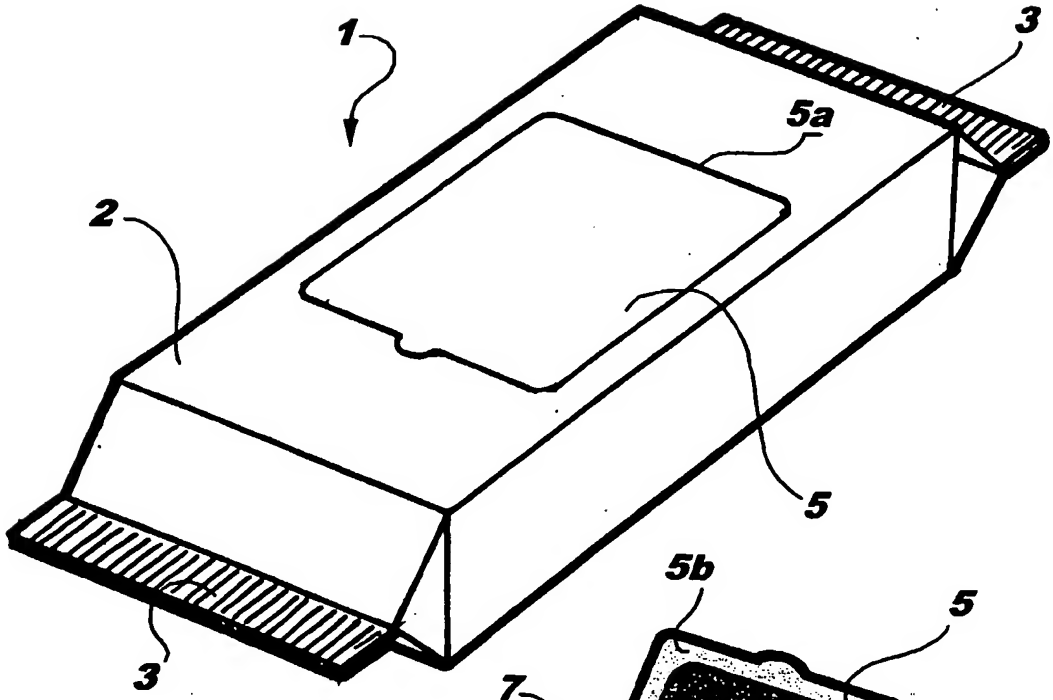
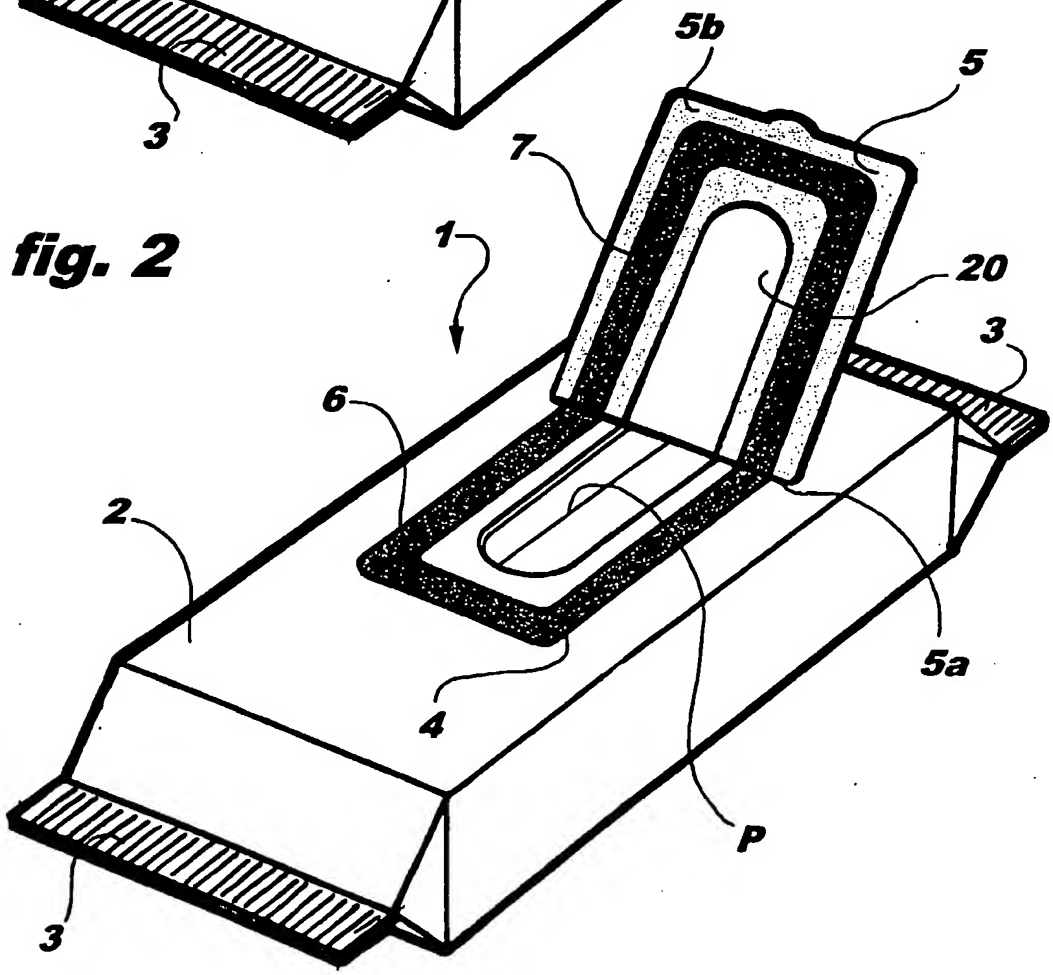


fig. 2



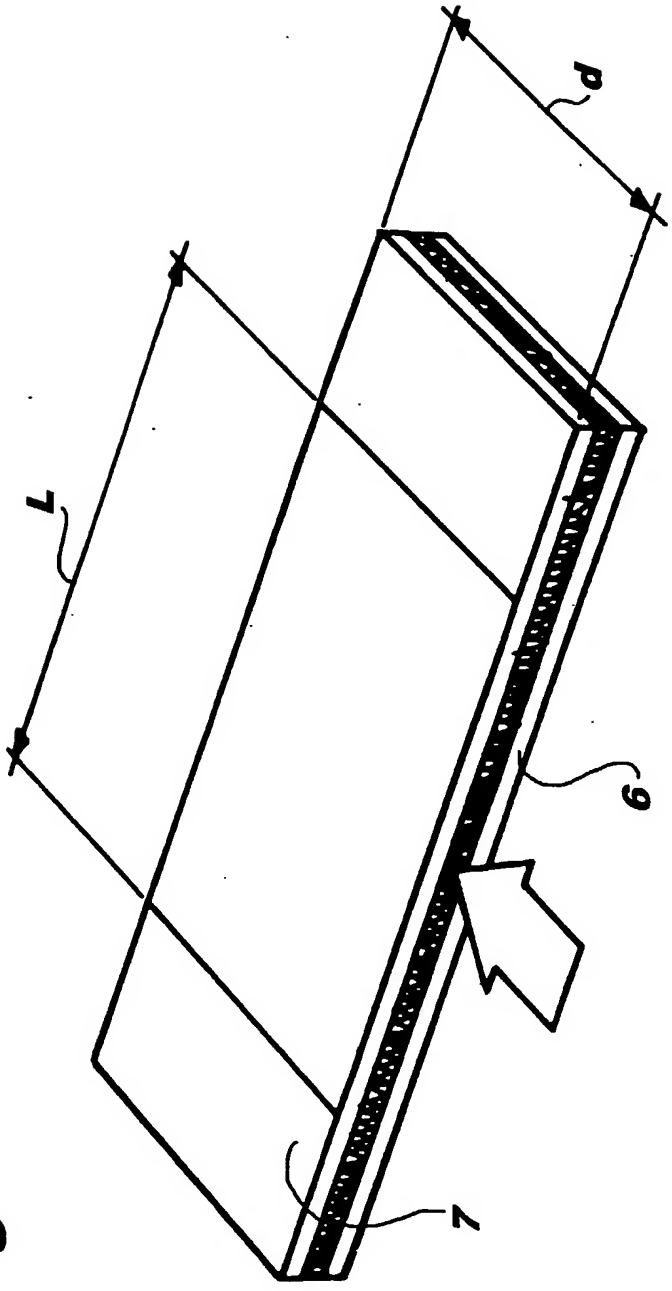


fig. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 99 83 0627

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	6 March 2000	Gino, C

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